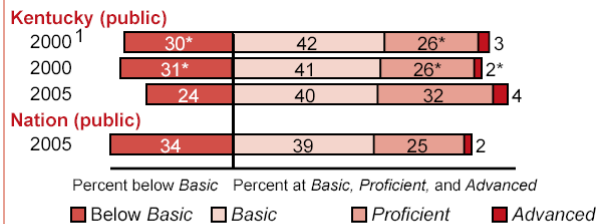


The National Assessment of Educational Progress (NAEP) assesses science in two major dimensions: Fields of Science (Earth, Physical, and Life) and Knowing and Doing Science (Conceptual Understanding, Scientific Investigation, and Practical Reasoning). The NAEP science scale ranges from 0 to 300. Scales are created separately for each grade.

### Overall Science Results for Kentucky

- In 2005, the average scale score for fourth-grade students in Kentucky was 158. This was higher than their average score in 2000 (152).<sup>1</sup>
- Kentucky's average score (158) in 2005 was higher than that of the nation's public schools (149).
- Of the 44 states and one jurisdiction that participated in the 2005 fourth-grade assessment, students' average scale score in Kentucky was higher than those in 28 jurisdictions, not significantly different from those in 13 jurisdictions, and lower than those in 3 jurisdictions.<sup>2</sup>
- The percentage of students in Kentucky who performed at or above the NAEP *Proficient* level was 36 percent in 2005. This percentage was greater than that in 2000 (28 percent).
- The percentage of students in Kentucky who performed at or above the NAEP *Basic* level was 76 percent in 2005. This percentage was greater than that in 2000 (69 percent).

### Student Percentages at NAEP Achievement Levels



<sup>1</sup> Accommodations were not permitted for this assessment.

NOTE: The NAEP grade 4 science achievement levels correspond to the following scale points: Below Basic, 137 or lower; Basic, 138–169; Proficient, 170–204; Advanced, 205 or above.

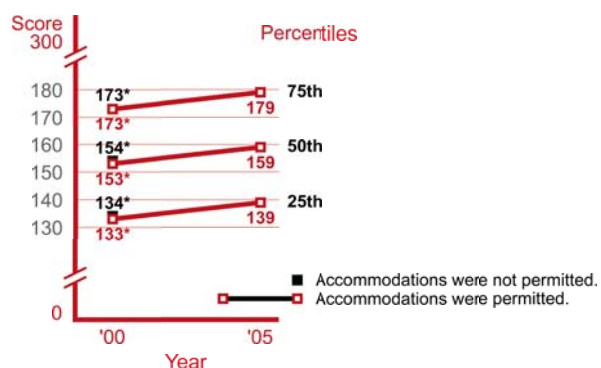
### Performance of NAEP Reporting Groups in Kentucky: 2005

| Reporting groups                                 | Percent of students | Average score | Percent below Basic | Percent of students at or above Basic | Percent of students at or above Proficient | Percent Advanced |
|--|---------------------|---------------|---------------------|---------------------------------------|--|------------------|
| Male   | 50                  | 159 ↑         | 23 ↓                | 77 ↑                                  | 38 ↑                                       | 4                |
| Female   | 50                  | 156 ↑         | 26 ↓                | 74 ↑                                  | 33 ↑                                       | 4 ↑              |
| White  | 85                  | 160 ↑         | 21 ↓                | 79 ↑                                  | 39 ↑                                       | 4 ↑              |
| Black  | 11                  | 138 ↑         | 49                  | 51                                    | 13   | 1                |
| Hispanic   | 2                   | 150           | 37                  | 63                                    | 23   | 2                |
| Asian/Pacific Islander                           | 1                   | ‡             | ‡                   | ‡                                     | ‡  | ‡                |
| American Indian/Alaska Native                    | #                   | ‡             | ‡                   | ‡                                     | ‡  | ‡                |
| Eligible for free/reduced-price school lunch     | 53 ↑                | 151 ↑         | 32 ↓                | 68 ↑                                  | 26 ↑                                       | 2                |
| Not eligible for free/reduced-price school lunch | 46                  | 166 ↑         | 15                  | 85                                    | 47 ↑                                       | 6                |

### Average Score Gaps Between Selected Groups

- In 2005, male students in Kentucky had an average score that was higher than that of female students by 3 points. In 2000, the average score for male students was higher than that of female students by 4 points.
- In 2005, Black students had an average score that was lower than that of White students by 22 points. In 2000, the average score for Black students was lower than that of White students by 25 points.
- In 2005, Hispanic students had an average score that was lower than that of White students by 11 points. Data are not reported for Hispanic students in 2000, because reporting standards were not met. Therefore, the performance gap results are not reported.
- In 2005, students who were eligible for free/reduced-price school lunch, an indicator of poverty, had an average score that was lower than that of students who were not eligible for free/reduced-price school lunch by 15 points. This performance gap was narrower than that of 2000 (21 points).
- In 2005, the score gap between students at the 75th percentile and students at the 25th percentile was 40 points. In 2000, the score gap between students at the 75th percentile and students at the 25th percentile was 40 points.

### Science Scale Scores at Selected Percentiles



Scores at selected percentiles on the NAEP science scale indicate how well students at lower, middle, and higher levels performed.

# The estimate rounds to zero.

‡ Reporting standards not met.

\* Significantly different from 2005.

↑ Significantly higher than 2000. ↓ Significantly lower than 2000.

<sup>1</sup> Comparisons (higher/lower/not different) are based on statistical tests. The .05 level was used for testing statistical significance. Comparisons across jurisdictions and comparisons with the nation or within a jurisdiction across years may be affected by differences in exclusion rates for students with disabilities (SD) and English language learners (ELL). The exclusion rates for SD and ELL in Kentucky were 2 percent and 1 percent in 2005, respectively. Statistical comparisons are calculated on the basis of unrounded scale scores or percentages.

<sup>2</sup> "Jurisdiction" refers to states and the Department of Defense Education Activity schools.

NOTE: Detail may not sum to totals because of rounding and because the "Information not available" category for free/reduced-price school lunch and the "Unclassified" category for race/ethnicity are not displayed. Visit <http://nces.ed.gov/nationsreportcard/states/> for additional results and detailed information.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2000 and 2005 Science Assessments.